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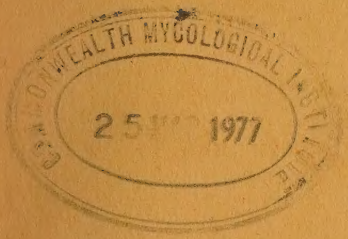

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ERRATA

(lines are counted from the beginning of the bibliographic data in each item.)

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Page	*Abstract*	*Line*	
13	77	1	for '[*Galecron*]' read '**[Galecron]**'
100	483	1-2	for 'Revista del Instituto de Investigaciones Médicas' read '*Revista del Instituto de Investigaciones Médicas*'
105	504	1	insert ', THE YOUNGER' after 'LEWIS, D.J.'
193	869	3	for '(*Noè, 1905*)' read '(Noè, 1905)'
286	1224	13	insert 'in the case of the amphipod *Gammarus* (1.5 – 12 times), bluegill fry (3.6 – 5.7' before 'times)'
303	1280	21-22	for '(*Theo.*) *is involved in the urban cycle of yellow fever*' read '(Theo.) is involved in the urban cycle of yellow fever'
333	1395	8	for '2560] and' read 'of studies showing'
333	1395	8	delete 'mating'
335	1400	6	for '(Birula, 1895) 'un' read '*bigemina* were observed'
335	1400	7	for '*Piroplasma in squash preparations of the eggs of two engorged females of Boophilis*' read 'in squash preparations of the eggs of two engorged females of *Boophilus*'
369	1524	9	insert 'triple-catch method [*47*, p. 76] did not. Bailey's' after 'Bailey's'
381	1564	3	for '(*Diptera: Culicidae*)' read '**(Diptera: Culicidae)**'
391	1597	48	delete 'these'
391	1597	49	for 'being greatest' read 'with the largest catches'
392	1601	3	for 'Khozyaĭastva' read 'Khozyaĭstva'
393	1608	2	for '**Tendipendidae**' read '**Tendipedidae**'
406	1661	2	for '**Tabanus**' read '*Tabanus*'
409	1673	4	insert 'Pavesi' after '*erinacei erinacei*'
417	1699	2	for '*Megnin, 1878. (First description in Spain).*' read '**Megnin, 1878. (First description in Spain).**'
417	1699	3	for 'descriptción *en España).*' read 'descripcion en España).'
420	1713	3	for '*Titvus*' read '*Tityus*'
420	1717	5	for '*var.*' read 'var.'
467	1900	5	for 'Anopheles atroparvus' read '*Anopheles atroparvus*'
467	1900	11	for 'A. maculipennis' read '*A. maculipennis*'
479	1942	7	for 'C.' read '*C.*'
479	1942	8	for 'sphagnumensis carjalaensis' read '*sphagnumensis carjalaensis*'
480	1948	10	for 'C. balius' read '*C. balius*'
512	2062	7	for '(Solenopsis)' read '(*Solenopsis*)'
521	2101	5	for 'Ixodes ricinus' read '*Ixodes ricinus*'
573	2292	12	insert 'following A. Stone et al. [*55*, 470; also, *62*, 2313]' after '*domestica*'
771	3076	5	insert 'is described from the larva, pupa, male and female' before 'and'
773	3083	12	for '(*Mangabeira*)' read '(Mangabeira)'
812	3223	6	for '(*Bl*^{e})' read '(*Bl*^{e})'
812	3223	9	for '*Bl*^{e}' read '*Bl*^{e}' twice
812	3223	10	for '*Bl*^{e}' read '*Bl*^{e}'
812	3223	12	for '*Bl*^{e}' read '*Bl*^{e}'
824	3263	14	insert 'at Finney Lake, whereas they were high from May to July' after 'July'

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Tanzania, Sleeping Sickness Service, Ministry of Health 1978
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SUBJECT CLASSIFICATION IN RAE

Subject classification of material selected for inclusion in the *Review* is performed in two stages. The first stage is the assignment of one or more sequence codes to each document, to determine the heading under which the abstract or title will be printed and other headings under which 'see also' cross-references will appear. The second stage is the selection of entries for the printed subject index. There is no thesaurus used to select index headings, but they are carefully checked to keep synonymy to a minimum. Vocabulary control is aided by the inclusion of inverted arthropod names, and of cross-references and synonyms for other organisms and for chemicals. A list of subheadings suitable for most subjects is maintained, and further subheadings are chosen as needed. The result of this method of indexing is a high level of consistency within each volume and a close match between headings in successive volumes; cross-references are given whenever headings are changed. The depth of indexing is such that there is a mean of 7.8 entries per abstract or title, though there may be more than one subheading per heading for any particular abstract. The most detailed entries are those under the names of arthropods, but other organisms, countries, chemicals, medical terms, habitats, and general subjects (e.g. Conferences; Irrigation; Rearing techniques) are also used as headings. All references are to abstract numbers.

Under the names of arthropods there are references to their control, distribution, hosts, natural enemies, taxonomy, vector ability, and miscellaneous subjects. Entries for species will be found under the generic name, and there are also inverted names with the specific and subspecific epithets placed first. The names used for arthropods in this index are those used in the abstracts, because these names have all been checked against the card indexes maintained by the Institute. These card indexes are continuously updated to take account of taxonomic revisions, and in cases of difficulty the taxonomists employed by the Institute or by the British Museum (Natural History) are consulted. If two or more names are accepted by the *Review* for a taxon during one year, each name is entered separately, with a 'see also' cross-reference to other names. Cross-references from names used by authors but not accepted by the *Review* are given to the currently-accepted names.

Animals other than arthropods are indexed to specific level only, under English common names for the more important domesticated birds and mammals or under scientific names. At both these types of heading will be found references to the arthropods that affect the animal concerned, to arthropod-transmitted pathogens, and to the side-effects of pesticides. Cross-references are given between common names (sometimes inverted) and scientific names.

Pathogens of animals other than arthropods are indexed at the name of the pathogen, the scientific name if one is available, or else the English common name. Some entries will also be found at the names of diseases (sometimes inverted). Viruses pathogenic for arthropods are indexed under the name of the host, and the hosts are listed at the heading 'Viruses and virus diseases'. Other pathogens of arthropods are indexed at the scientific name of the pathogen.

Geographical locations are keyworded, as appropriate, to faunal regions, continents, countries, archipelagoes or islands, and, for Australia, Canada and the USA, to States and Provinces. The subheadings refer mainly to pest arthropods, with some references to pest control and diseases.

Chemicals are normally indexed under either a common name or a systematic name. The common names used at present for pest-control chemicals are listed in the Editorial to volume 59 (1971) and in abstracts 2154 and 2376 in this volume of the *Review*. A few unidentified or complex substances are indexed under names used by authors, and all remaining substances are indexed under the names used in the indexes of *Chemical Abstracts* volumes 76-85. Cross-references are provided to these inverted systematic names, and in some cases synonyms are given with the entries. Cross-references are also provided from inverted systematic names to the common names used for pest-control chemicals, and definitions are printed at these headings.

Medical, immunological, and veterinary headings are normally selected from either *Medical Subject Headings* or *Veterinary Subject Headings*.

Habitat headings are chosen, whenever possible, beginning with either the name of a vertebrate (e.g. Cattle sheds; Poultry houses) or of a crop (e.g. Rice-fields), though stands of trees grown for timber are indexed under 'Forests' or 'Woodland'. In most other cases, inverted names are selected as headings (e.g. Pastures, irrigated; Ponds, temporary; Swamps, mangrove). Subheadings are mostly concerned with the distribution of arthropods and the non-target effects of pest control.

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Annual reports (1973)
CSIRO Division of Animal Health 2176
Danish Pest Infestation Laboratory 2813
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Laboratoire de Recherches Vétérinaires de Farcha 2286
SEAMEO-TROPMED National Centre, Malaysia 2595
Sleeping Sickness Service, Ministry of Health, Tanzania 1978
Annual reports (1973-74)
Australian Meat Research Committee 2167
CSIRO 2896
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NEW CAB JOURNALS INTRODUCED SINCE 1975

n response to demand, CAB introduced during 1975 a number of new journals. More* have been ntroduced during 1976 and a new journal, Protozoological Abstracts, devoted entirely to the arasitic protozoa will begin publication in January 1977.

he new journals can be obtained at half price to new subscribers if orders are received before 1 uly, 1977.

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A – Annual B – Biennial M – Monthly O – Occasional Q – Quarterly

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